NBC NEWS - STS-4 LAUNCH (6-27-1982)

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From Sunday, June 27th, 1982 NBC NEWS Coverage of STS-4, the 4th Space Shuttle Launch.

STS-4 CREW:
Commander: Thomas K. Mattingly II
Pilot: Henry W. Hartsfield, Jr.

- Launched at 11:00 am EDT.

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live from the kennedy space center in florida nbc news covers the launch of space shuttle four here is nbc news correspondent tom brokaw good morning everything uh good good morning everyone what i wanted to say is that everything is going extremely well here at the kennedy space center we're now at t minus 39 uh minutes and 31 seconds and all is going well as you can see space shuttle 4 is on the launch pad the astronauts that's tk thomas k mattingly known as ken mattingly to his colleagues and henry hartsfield are in the orbiter this is the last in the test flight series of the columbia orbiter and it has a number of unique dimensions to it including a military payload for the first time officially classified top secret we'll be talking more about that it is scheduled to land after 113 orbits of the earth next sunday july 4th in california and president reagan is expected to be there for touchdown launch time this morning 11 a.m eastern daylight time and we expect that to go off on schedule however as we have learned from past launches there can be an interruption or two last night the possibility of some danger to the columbia orbiter as a result of a fairly severe electrical and hail storm over cape canaveral here at the kennedy space center let us show you a picture of what happened it looks like something from dr strangelove's laboratory a bolt of lightning nearby a fairly intense as i say hail storm and some of those protective tiles took some damage they were dinged so to speak about 400 of them all together but nasa managed to get them repaired and now to describe that repair here's our mr fixit robert brazile our science correspondent bob good morning tom i was here yesterday afternoon when that storm hit it was a typical florida afternoon storm but it was very strong and it was centered right over the launch pad

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the storm which began just after 4 pm yesterday brought heavy rain hail and some fierce lightning the lightning set off fire alarms on launch pad 39a but when fire trucks arrived they found no problems soon afterwards however workers on the pad discovered that the hailstones had dented some of the thermal protection tiles on the columbia's surface you can see the dents as white spots on the outside of the tiles inspection teams who had been summoned from home checked out the shuttle skin and decided repairs were needed the huge scaffolding structure was rolled back into place so the repairs could begin the mr fixit aspect was that they didn't need to replace any of the tiles last night what they did was they spackled them much the same way as you would fix some plaster in your home in fact the work on that the tiles was completed two hours early just after midnight with no interruption to the countdown so as of now everything is still going very smoothly it looks very good for a launch on time tom thank you very much bob we'll be talking about the clock of course during the course of this next 90 minutes that will be on the air here for the launch of space shuttle four let me remind you that there are two times that we are talking about we're now officially on the clock at t minus 36 minutes but that does not mean it's going to launch in 36 minutes because there are two 10-minute holds built into this next hour before the scheduled liftoff at 11 a.m this morning eastern eastern daylight time it is the soyuz t6 set off from central russia for a rendezvous with the soviet space station that's been in orbit for more than a month on board these soyuz t6 two soviet cosmonauts and the first non-american westerner to fly in space frenchman jean-luc was the first one to come out today as the soyuz docked friday night with the space station the cosmonauts reported that everything went smoothly back to you tom thank you very much john hardin new york and we've just heard once again here at

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and we've just heard once again here at the kennedy space center that all is going satisfactorily as they're putting it in an understatement toward an 11 a.m eastern daylight time launch this morning of space shuttle four the last in the test flight series of the space transportation system we'll be back with more from the kennedy space center so the challenger is coming onto the line now and of course this space program the space shuttle system is still a very popular success in this country according to all recent polls but recently a congressional advisory committee raised some questions about our civilian space program in this country two weeks ago the congressional office of technology released this very thick 391-page report the bottom line is that american leadership in non-military space technology is seriously threatened because the government simply has not very well defined long-range goals even the commercial promise of this shuttle has been dimmed somewhat by competition in the world launchings will be less frequent than planned originally by nasa now estimated at 300 flights through 1992 instead of 500 according to the original blueprint and they will cost more perhaps twice as much as they were originally estimated to cost nasa has now contracts put up uh to put up 62 domestic and 50 foreign telecommunication satellites but it is getting stiff competition from something called ariane space now that's a commercial space company developed by the 11 nation european space agency but mostly it is controlled by france we want to show you uh some of their advertising as well it's been advertising in magazines like this one aviation week in space technology it already has three american companies general telephone southern pacific communications and western union ariane space uses an expendable rocket system it will charge 28 million dollars for each launch nasa originally figured it would be easy to beat that figure that it would share cargo space with several customers originally the nasa price was about 31 million dollars for a full shuttle ride but inflation probably will push that up

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but inflation probably will push that up to 40 million dollars by 1983 and we're now told as much as 71 million dollars in late 1985. well to talk about all those figures in the future of the space program is congressman ronnie flippo a democrat from alabama with us now he's chairman of the house space science and application subcommittee congressman let me ask you do you think that we do have enough definition going into this space transportation system yes i think so our problem as you mentioned about not getting enough uh other types of civilian programs is a matter of money we are we're really losing our leadership in communications and remote sensing and a lot of civilian programs but it's a matter of money but there's been a fair amount of commercial skepticism about the uh practicality of this hasn't there well there there has been but uh i think these demonstrations are proving that that skepticism is uh poorly placed that the shuttle is doing a great job and uh as we get more routine uh we can get the cost down all right but the fact is that we're now twice as much as the european space agency well i think you have to say uh many people feel the europeans are subsidizing the cost of their operations there and if that is the truth uh then there's no way you can they can always cut the price if that's the deal but the shuttle has many unique capabilities such as the ability to repair in space and retrieve so that future satellites can be designed for more state time in orbit and and repair make them reusable as well one company in new jersey wants to buy one of these orbiters it wants to be the owner of a columbia or a challenger or whatever and then have nasa as a contractor put it up for it is that a good idea well i'm not sure it's worth investigating i do think that we have to move the shuttle to the private sector we have to involve more private sector funding in the space program because we're at a stage now where we need large dollars and we need the the management that comes from private sector you uh you come from alabama which has a fair amount of space related employment going on down there so i suspect you don't hear from your

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suspect you don't hear from your constituents very much about uh the cost of this program yes alabama is very proud to be participating in the program uh the cost of the program is uh showing great growth in communications and to the extent that we have a dynamic economy today is because of the investments that we made few years ago in science and technology but do you think that as we continue to spend more money on say military payloads and as that becomes more visible that the country in a recession we're going to say hey wait a minute you know this is just not cost effective i think the people want to use the technology developed by shuttle for national defense purposes if that's necessary what we don't want to happen we don't want to squeeze out squeeze out civilian programs by using money appropriated for civilian purposes for primarily military payloads that's the problem uh i don't think anyone objects to using it but they we do object to not being able to go forward with communications and remote sensing and materials processing and those kind of programs that we really need in the private sector in the civilian sector all right thank you very much congressman football for being with us thank you tom okay we'll look forward to it uh the situation is looking very good here the weather we just had a report on that from hugh harris and he says it's looking just fine visibility is good and of course that's important in case they have to do a an immediate abort and come back here and land on that three-mile long runway at the kennedy space center we're now officially at 24 minutes and 12 seconds and counting very well there you can see the orbiter on the launch pad with the brown external tank and the two solid rocket boosters 10-minute hold still planned things are looking good and we'll be back with more from the kennedy space center right after this we're back from the kennedy space center where all continues to go well for the launch of space shuttle 4 that will go off the pad if everything continues this way at 11 a.m eastern daylight time this morning they're now at t minus 21 minutes and counting they've just

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minutes and counting they've just transferred the computer load from the primary to the backup i have that in the right sequence primary to backup computers and that is apparently going all right we've had some troubles with the computers and previous slices you well know there's a 10 minute hold scheduled at 20 minutes so we'll be in a whole pattern and then we'll have one more ten minute hold so everything continues to go well astronauts tk mattingly as he's known to his colleagues at the johnson space center thomas kenneth mattingly and henry hartsfield are in the columbia orbiter and they're ready for a seven day flight 113 orbits carol burnett is that a fair way of putting it i should say so i've never been called a groupie before but if it comes to space yes i am you're all dried out from your well-soaked role on annie and you're down here because you told barbara walters recently that you'd like to be an astronaut is that the wildest i opened my big mouth on television and look what happened i got a call from nasa the very next day and uh it wasn't to be an astronaut but it's the next best thing to come down here and see the launching and here i am what makes it so appealing to you what intrigues you about the space program i think ever since i was uh ever since i can remember when i started reading or just looking up into the skies as a little girl i wanted to i wanted to go out there i wanted to know what it was like i wanted to be there and i was interested in astronomy as a child and things change you know and i went about doing my own thing of course then it wasn't too uh encouraging for a little girl to do any of these things and uh so of course it never happened but i just had this thrill a few minutes ago meeting sally ride who's going to be going up uh coming up with rick howard right with rick april 20th i believe six days yes well i tell you i just i couldn't stop touching her i was so excited to meet meet someone uh like that you know gosh a woman finally i think yes well texas for me then california now hawaii yeah that's very nice let me ask

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hawaii yeah that's very nice let me ask you uh have you ever been nervous about flying yourself yes i used to get yes i went through that period where i would be nervous to put air mail on a letter you know and then i and then i got over it because i fly quite a bit now since we live in hawaii and we uh i get cessna lag just from going uh you know inner island and i'm not frightened of it at all now in fact i'm planning on taking flying lessons starting in september when i go back home to maui and you honestly think that maybe someday you will get to go up as a passenger if they will allow that i want to sign my name yes if they would let me go up today i would do it you go right up here and strap it you bet i might need a jumpsuit and a helmet or something but you you guys have that right well we have a few liners i'd do it hey man any stowaway i'm ready i would do it yes okay carol burnett who went from being interested in the stars to being a very big star herself here for the launch and my guess is carol that as much as you're ready for it it will be even grander than you anticipated because it just blows away everybody who comes out i know it's a thrill to be here and god bless everybody nice to see you again thank you tom everything is going well we're at the hold period now we've got a 10 minute hold at 20 minutes on the nasa countdown clock that means that they'll be making some uh prearranged checks making sure that everything is in good order the astronauts are up there going through with their pre-flight manual making sure that all is well in the cockpit too you can see it out there on the launch pad at the kennedy space center that's the big external tank in the background now brown originally white but they decided not to paint it because they could save money and about 600 pounds at liftoff by leaving it in its natural state those two solid rocket boosters on the side there which get it right off the pad uh they're later recovered although these are still the new ones they haven't started recycling those yet we'll be back with more from the case uh kennedy space center right after this hi we're back at the kennedy space center as you can see we're in a 10-minute hold with a countdown clock now showing 20 minutes and holding it's a pre-arranged 10-minute hold as they go through a number of their

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they go through a number of their pre-flight procedures the columbia orbiter with its back to you so to speak we'll be talking more about some of the goals of this particular mission it is the last in the test flight series this is the fourth now it'll become operational this fall in november with sts-5 now in the scheduled 10-minute hold with the countdown clock holding at nine minutes still scheduled to lift off at 11 a.m eastern daylight time this morning it does continue right on schedule during the course of this flight we'll be talking a lot about the military payload this one is called dod 82-1 and although the military uh rather belatedly of classified a top secret so they couldn't discuss it at all there'd been so much congressional testimony about it and discussion of it in technical magazines that we all know that it's uh something to do with an infrared radiance instrumentation of some of the packages on board because later on they'll want to have some military satellites and so on that can pick up weapons as they move across uh the planet earth so this one is a cirrus is the official nickname of it's the cyrogenic infrared radiance instrument but as i say the department of defense can't talk about that one-third of the 40 flights uh until 1985 will be carrying military packages of one's kind or another and then later on in 1984 the military will launch its own space shuttle transportation systems from vandenberg out in california uh dick boriani has been looking into the whole military aspect of this and some of the controversy that it has generated for the space program here's his report recent congressional hearings focused on a growing concern about the space shuttle concern that a program funded almost entirely through the civilian budget of nasa may be overwhelmed by military projects their general agreement that pentagon support was instrumental in getting the shuttle off the ground but critics of the military's growing role were not reassured by a statement made this week by the air force chief of staff general lou allen we already depend very very heavily on

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we already depend very very heavily on space systems and their capabilities for a number of aspects of warfare and including those aspects preceding warfare such as warning and that i can see no prospect but that that will increase it's likely the controversy will increase as well as indicated by congressman harold hollenbeck the ranking republican on the house subcommittee which oversees the space program the question of the decade may be then whether we use the shuttle for peace or for war now that the shuttle works the military has climbed aboard the bandwagon the gauntlet is down and the battle will be to save the civilian agency that brought us to the moon and beyond i promise you that there are fights ahead and unless we are vigilant the civilian space program could be swallowed up in the giant whale called the pentagon a man who has been to the moon and who is now in the senate sees a different battle shaping up a battle to make the pentagon at least pay its own way if you just perform an objective analysis using the numbers provided by nasa and agreed to by the department of defense you find that over the next several years the nasa budget will literally subsidize defense launches now a little bit of subsidy is probably okay in order to even out the yearly fluctuations in the prices knowing that that subsidy will be recovered uh in later years but the degree to which the the nasa budget subsidizes the defense budget is is extreme your basic point is that the department of defense is not paying its fair share and should there is no commitment on the part of the military at this point to pay their fair share of the operational cost of the space shuttle and that is the current battle nasa officials point out that most of the shuttle's military missions will deal with such routine functions as satellite surveillance weather and communications but some members of congress are worried that the shuttle will eventually be used

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that the shuttle will eventually be used to launch this country into a military competition with the russians in space richard valeriani nbc news at the pentagon and back here of course at the kennedy space center the shuttle 4 is getting a lot of attention because of the military payload that is carrying the first in the shuttle series and there will be a good many more before this series ends we'll be back with more from the kennedy space center right after this back at the kennedy space center now i'm tom brokaw here with navy captain rick houck who is a member of the astronaut corps we've been listening to some of the communication we have about two minutes left in a nine-minute hole that is planned before the scheduled liftoff at 11 am this morning we just heard the possibility of some trouble they've got a little difficulty with fuel cell number one and they want to make sure that that's all in order before they come out one measurement that was slightly uh out of limits and we haven't heard any more about that to expand on that all right so we'll watch and if this hold stays longer than the scheduled nine minutes they may be working in that a while but they've always been pretty good about telling us so what to expect here let's talk for a moment about the astronauts this is an all auburn team uh tk mattingly class of 58 as i recall and henry hartsfield class of 56 at auburn university a couple of engineering students uh two guys from alabama who get along pretty well right both rotc students by the way both got their commissions in that manner right now they're laying back they're probably more comfortable than you and i are tom because they're laying back on their backs in the seats and have their air-conditioned suits on getting a good breath of fresh air so they're just waiting right now there's nothing that they have they completed most of the checklist at this point yes they have one of the major things they'll do when we come out of this hole is that t minus five minutes they'll start the apus okay among other things uh hartsfield may have to take a little medication because they've been having some trouble with uh motion sickness on these flights let's take a look now at these two astronauts thomas

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astronauts thomas ken mattingly and henry hartsfield and the lives that they have led getting to this very dramatic point astronaut mattingly hopes that someday the people who run the space program will send a poet aboard the shuttle so he or she can come back and describe just how beautiful the whole thing is meanwhile mattingly has his own feelings he says space shuttle is a freeway going into the future astronaut hank hartsfield's observations on the other hand are more down to earth i'm ready mattingly in hartsfield a study in contrast to begin with mattingly while younger is the more experienced he's been an astronaut since 1966 he's been to the moon and back aboard apollo and he's had just one major career disappointment he was scrubbed from the apollo 13 mission three days before the launch because he'd been exposed to german measles that's an experience he's not forgotten that's what ken mattingly do any of your friends have german meals these days [Laughter] no hartsfield has been an astronaut since 1969. before that he was with the manned orbiting laboratory program which was then canceled this will be his first spaceflight and while waiting his hair has turned gray literally i'll have to admit that there were several low points the lowest probably was when the mo program was cancelled and then uh everything got bright again i came down here and then it was very obvious in the early 70s that uh with curtailment apollo program and cut back in skylab things were going downhill again and it was very easy to see that there were not going to be any flight opportunities in the very near future this was depressing i have to be honest with you it began to look like things were just a little too far away from me but i couldn't think anything else to what i'd i would rather do

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what i'd i would rather do it turns out these two astronauts went to the same university auburn although not at the same time hartsville class of 1954 mattingly is class of 1958. according to one of his professors mattingly was a real go-getter in his senior year he was president of the student government one of hartsfield's professors remembers him as a good capable student and easygoing and his partner thinks they'll have a good time in space because space flight is is exhilarating is the only word i can think of to describe the feeling a poet might say it more poetically but then again a poet might be just as awed by space flight as an astronaut we may have an answer to all that by the 21st century we're back and we're counting at uh seven minutes and 52 seconds as you can see to the scheduled launch that is the real-time countdown right now still scheduled for 11 a.m eastern daylight time this morning all procedures are operating as they are expected to so far as we know we think that we will have an on time liftoff here from the kennedy space center we'll be back with more from the kennedy space center including the launch right after this nbc news coverage of the launch we're back at the kennedy space center and we're getting on with it with 5 minutes and 14 seconds now to the scheduled launch of space shuttle four captain rick how can a member of the astronaut corps what should we listen for as they lift off i think there are four calls that the folks ought to listen for about 10 seconds after launch they should hear the pilot or the commander call out roll program and that's when the orbiter makes a beautiful turn as it heads down range and that's sort of a communications check the second one is srb set solid rocket booster separation that's about two minutes after liftoff

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that's about two minutes after liftoff and they can help locate the boosters by that call then about eight and a half minutes into the flight it's miko main engine cut off that's when the three main engines finally terminate and then about 30 seconds after that they'll probably hear a call of e.t seth that's external tank separation and that means the orbit is by itself and it's about to light its two ohms engines to go in orbit okay those are the calls we'll all be listening for and i know that the folks in utah will be especially interested in this because there are nine experiments on board in the getaway special from utah state university everything from brine shrimp to fruit flies and how they perform in zero g what we're going to do right now with uh four minutes and oh about four minutes approximately to count down is we're going to turn you over to hugh harris who is the voice of the kennedy space center and he'll take you through all the final procedures and then we'll have liftoff we expect right on schedule all we know although we know in the past from experiences then that we can be disappointed with less than a minute to go but we don't expect any problems here today as you can see a lot of activity beginning to be generated now around the launch pad 3 here at the kennedy space center so here once again hugh harris the final helium purge of the orbiter's main engines has started to ensure there's no surplus hydrogen or oxygen in the area at the time of ignition t minus three minutes 30 seconds and counting the elevon speed brakes and rudders are moved through a pre-programmed pattern at this point to ensure they're ready to be used during flight the shuttle is now on internal power however the fuel cells are still receiving their fuels from ground support equipment for another minute t minus three minutes five seconds and counting the engine gimbal or movement check is underway t minus three minutes and counting t minus two minutes fifty four seconds the liquid oxygen valve for filling the external tank is closed and

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external tank is closed and pressurization has begun after the tank is pressurized the hole capability is limited to 3 minutes and 36 seconds t-minus 2 minutes 40 seconds and counting the gaseous oxygen bent arm will be retracted t minus 2 minutes 30 seconds the fuel cell ground supply of oxygen and hydrogen has been terminated and the vehicle is now using its onboard supply the gaseous oxygen bent arm has been retracted t minus two minutes 15 seconds and counting the main engines have been moved to start position the astronauts have cleared the caution and memory warnings uh in their on-board computers and verified there are no unexpected errors t-minus two minutes and counting the astronauts are configuring the auxiliary power units for liftoff the liquid hydrogen vent valve has been closed in flight pressurization underway t-minus one minute 45 seconds the computer will automatically verify the readiness of the main engines to start at t minus one minute minus t minus 90 seconds and counting t minus one minute twenty seconds and counting the liquid hydrogen tank is at flight pressure coming up on the one minute point in our countdown coming up on p minus one minute t minus one minute and counting the firing system for the sound suppression water system on the pad is armed

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minus 45 seconds we're 14 seconds away from switching command of the countdown from the ground computers to the onboard computers and the development flight instrumentation recorders are on t-minus 35 seconds the gox vent arm is fully retracted and we're switching control of the countdown to the onboard computers t minus 25 seconds the srb hydraulic power units have started t minus 20 seconds and counting t minus 15. t minus 10 9 8 7 6. we have main engine ignition four three two one and we have solid motor ignition and liftoff lift off of america's space shuttle on a source mission and we observe the power houston now controlling mission consulting firms starting 20 seconds run looks good 26 seconds rolling over completed 30 seconds one nautical mile in altitude throttling engines down to 65 percent nas program 36 seconds quad board status looks good mission control 42 seconds columbia now three nautical miles in altitude 46 seconds coming up on create a maximum aerodynamic pressure on the vehicle 52 seconds columbia now four nautical miles in the altitude 56 seconds pass through max q still looking good throttling hits giving a good throttle up mark one minute ten seconds columbia now seven nautical miles in altitude four

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seven nautical miles in altitude four nautical miles downrange one minute twenty seconds columbia now nine nautical miles an altitude six nautical milestone range one minute thirty seconds columbia now twelve nautical miles in altitude 9 nautical miles downrange velocity now reading 3 900 feet per second one minute 42 seconds coming up now on negative seats where altitude is too high for ejection seat use columbia houston negative seats one minute 57 seconds columbia now 21 nautical miles in altitude 21 nautical miles downrange two minutes three seconds standing by for solid rocket booster separation there you have the animation as we are showing you what is actually happening in space although that's our animated picture right now the big solid rocket boosters are separating they've done their work they're uh there for about two minutes this uh flight is the best yet in the uh space shuttle test series right off right on schedule there you can see the picture that's you can still see the three main engines burning there that little triangle of light we're watching oh that was beautiful two minutes 35 seconds because he's never seen one of these before i hope the next one i have to watch it from inside yeah not too bad it's april of next year all right we're waiting now for uh as you can see the external tank separation in six minutes uh that's when it's scheduled to happen as they fly downrange over the atlantic ocean here they're just uh sitting in there monitoring their systems henry in the right seat is probably changing displays on his uh cathode ray tube looking at the various systems and just making himself feel good that everything's working good columbia houston you have two engine power capability two engine towel that means that if they were to lose one engine now they could

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were to lose one engine now they could still make it to the car sending out colombia now has landing capability at dakar airport should one engine go out three minutes 20 seconds columbia now 44 nautical miles in altitude 83 nautical miles downrange a return status check and mission control by flight director tom holloway three minutes 35 seconds mattingly and hartsfield given a go to continue three minutes 40 seconds columbia now 48 nautical miles in altitude 102 nautical miles downrange velocity now reading 7 800 feet per second all right what you see there in that middle box just to the left that's the time to the external tank separation four minutes and 54 seconds and counting right now that big brown tank will break away and break up as it goes down over the ocean we'll be back to see how that's going uh we'll be back with more from the kennedy space center right afterwards eight seconds with that call up matty and hartsfield committed to space traveling [Music] we're back here with our uh astronaut from the johnson space center rick hauck and our space groupie joe burnett who's just gone to general's rank in that category i'm i'm astounded about the whole thing we're standing out there and you know how hot it is right i got goosebumps i got cold it was fascinating the sound is something that we just found yeah it's like an earthquake you know and then all of that fire going up and everything how are they going to sleep with all that going on i still want to go i think yes i do oh i suspect for the first 12 or 13 minutes they probably won't want it a little busy and let me just ask did someone just tell me outside uh that uh they're going over europe and in an hour they're going to be over hawaii that's right it'll be about an hour and 30 minutes before they're back overhead you can get home fast that's fast isn't it you could get home in a hurry i sure could oh gosh it was wonderful well it was

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gosh it was wonderful well it was awfully good of you to come down here and i know you collected enough souvenirs look at all of that got this thanks for my nbc shirt i love it oh thank you for everything well that's that's it i knew of your after payment actually we ought to bring you up to date on what is happening right now downrange carol we're going to show you a little animation of what's going to happen next as long as you're going to get involved in this program we're going to make you a technical expert as well in the acronyms yeah you get to learn all the things that we're talking about what they're getting ready to do as we said just a few moments ago is to get rid of etf stands for external tank separation that's that big fuel tank that big brown thing that was on there and that's gonna they're gonna blow that away from the columbia orbiter and uh it will then break up over the indian ocean and as rick pointed out yesterday where there is no discernible life that's where i know it so nobody gets hurt in the process i might mention that right after that it's external tank separates is really probably the busiest time for them the next two minutes they have to get configured for the next ohms engine or orbital maneuvering system burn so two minutes after external tank are a very very busy time no that's what's happening right in 30 seconds they'll lose that mission control everything's sounding good eight minutes 29 seconds standing by now for main engine cutoff that's the miko we were talking about main engine cut off in about 10 seconds the main engine has been fueled by that big external tank running that's what should be happening right that's a good picture from a previous mission that's the external tank looking out through one of the cameras from external tank separation colombia now moving below and beyond the external tank okay that's confirmed now no go status check emission control by flight director tom holloway for the first homes burning shutting down the auxiliary power unit

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they're getting a go no-go in the mission control center in houston now for uh shutting down the apu's once they shut down the apu's they've secured their hydraulic system and they're they're pretty well committed to that's the auxiliary power unit of course which we've heard a lot about on these previous flights okay everything is looking very good here for space shuttle four it launched right on time uh all of the counts and all the towels that you can hear this morning so far have gone off extremely well scheduled 113 orbits landing next week july 4th in california the astronauts are thomas kenneth mattingly known as tk to his friends he's the commander and henry hartsfield a retired air force colonel sitting in the right hand seat we'll be back with more okay okay we're getting coming up on ohms1 now this is the orbital maneuver system we're number one that gets them into a proper configuration so that they can get into into an orbit right there this will lift them up to about 130 miles above the earth for their what we call our apogee or highest part of the orbit and then halfway around the world they'll light that engine again and circularize the orbit and then we can say for sure that they're in a stable 130 mile orbit so that's about 40 minutes from now columbia now and proper attitude for the first ohms burn they're going to be running at about uh what 155 160 miles prop systems engineering ignition on both homes engine looks good that's about a 90 minute period every 90 minutes they go around the earth one time okay almost one went just fine so they're going into uh they're going into orbit in good shape we're going to show you one more time the liftoff this morning let us show you what happened at 11 a.m right on schedule eastern daylight time this morning space shuttle 4 going off the pad

[00:38:01 (https://www.youtube.com/watch?v=thNzPNhQwW4&t=2281s)](https://www.youtube.com/watch?v=thNzPNhQwW4&t=2281s)

we going to see that we can't see it in 12 minutes into the flight they've had a successful ohms one all the solid rockets went away on schedule as did the external tank everything continue to look very good uh this is i think that it's fair to say the best on time the most fault free of the launches of this and i think nasa felt a little pressure about getting this one off oh i think so well we always do you want to do things right you want to do them on time and that's part of the business and the space business and be able to provide a service on time well especially when you're trying to be commercial about it exactly we have roy neal standing by at mission control which of course is at the johnson space center in houston texas how does it look down there roy tom the big word in mission control is nominal that's of course nasa ease and it stands for everything's going just right by the book we've been following the book here in houston as have the mission controllers this is the scene in mission control right now and if you look at that dot on the big map up near the top of your picture that's where the spacecraft is at the moment it is out of contact out of radio communication soon to be picked up at dakar senegal a few moments ago you and carol were talking about how rapidly that spacecraft moves along as we watch this map it doesn't seem to be very fast until suddenly you realize that minute by minute it goes clean around the world these mission controllers have been following and uh have by now uh monitored through the ohms burn that you were talking of a moment ago the orbital maneuvering system and of course the next big activity for the mission controllers will be olmsburn number two on the far side of the world in about a half an hour at that time uh hopefully the flight will remain nominal and that way all those mission controllers will light up the sky with their smiles when they come off shift in an hour or two from now once the spacecraft really is confirmed into a good circular 130 mile orbit that's about it from here okay

[00:40:00 (https://www.youtube.com/watch?v=thNzPNhQwW4&t=2400s)](https://www.youtube.com/watch?v=thNzPNhQwW4&t=2400s)

orbit that's about it from here okay well as you uh we can say it again and again but you only need to hear it once it's all gone extremely well here from the kennedy space center this morning space shuttle four off on schedule and it's moving into its orbital configuration right now it's looking very good for the two astronauts mattingly in hartsfield and for all the people connected with this launch of space shuttle four we'll be back with more from the kennedy space center right after this nbc news coverage of the launch of space shuttle 4 will continue in a moment [Music] tom brokaw back at the kennedy space center where we are now just over 16 minutes into a very successful launch of space shuttle 4 the columbia orbiter with astronauts manning lay in hartsfield aboard off right on time this morning 11am eastern daylight time and all of their post-launch procedures have gone extremely well as as well they have had the successful ohms burn that's the orbital maneuvering system burn which gets them into configuration for orbit they're now out of a range of the radios they're headed for the car in senegal i think we believe that they'll be picked up there next at any rate it has gone extremely well here today of course when we're in a moment like this it does raise a lot of questions about enthusiasm of the american public for supporting a space program which can be very expensive the most recent nbc poll on that question last august indicated that fully two-thirds of the people thought that the space shuttle system was a good idea it was across this expanse of florida scrub land and swamp after all that americans watched the most dramatic moment in space and that was the launch of apollo 11 the first moon landing public support public skepticism often is hard to measure about the space program for most americans the big moments now are gone that is the landing on the moon the first launch of the space shuttle system for other americans like my colleague rick hauck it's still to come when he goes up next spring of course for others however the enthusiasm still is there some of the true believers flocked to space day in northern new jersey last

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space day in northern new jersey last weekend two thousand people crowding into an airport hangar and teterboro he couldn't make it announcement they're heroes still made of the right stuff fascination still with the marvelous machines that have journeyed to worlds beyond the launch date is they ask questions the capacity for wonder has not been blunted they sign up to learn more they see the space program as a benefit for all society those who want to abandon the space effort in order to handle problems on earth simply do not understand that solutions for problems in farming the environment energy and communications are out there a week earlier on a college campus in connecticut another appeal for public support a space festival co-sponsored by the planetary society claiming to be the fastest growing membership organization of any kind 120 000 people paying 15 a year in dues its executive director is dr louis friedman who spent 10 years with nasa there's been enormous interest in space exploration there's no question of that politicians even believe that the space program is good it's just that extra bit of translation into making it a program that the government ought to do because it takes some forethought that it's something we're doing for the future that hasn't happened [Applause] probably never again will there be anything similar to the massive government space effort mounted in the early 1960s but the faith will still come to a space day rally in new jersey to planetariums big and small now more than 1200 across the country with attendance in the millions and still increasing to the visitor center at cape kennedy now up to two million people a year a 33 percent gain and some stand in line outside a movie theater this summer

[00:44:01 (https://www.youtube.com/watch?v=thNzPNhQwW4&t=2641s)](https://www.youtube.com/watch?v=thNzPNhQwW4&t=2641s)

outside a movie theater this summer willing to pay five dollars for a little space adventure on film [Music] coming up in 20 minutes into the flight now of space shuttle 4 and they are monitoring a little tiny jet up in the nose of the spacecraft it sounds like now the astronauts still out of radio signals as far as i can tell they're getting a lot of telemetry and data that is fed back into houston and that's where they're reading those signals we have roy neal in houston right now for an update on this mission roy glad you tossed it to me tom because they do now they've just reestablished contact through dakar they're talking with henry hartsfield and here i'm talking with astronaut steve nagle steve what is this subject about which they're talking at the moment uh hartsfield that uh received a fault message for a forward rcs leak that's the reaction it's a reaction control system and it declared a leak on one of the four or five manifolds in that system it's not a serious problem i don't believe it's a leak at this time they're comparing the pressures and quantities they don't see any evidence of a leak so it could be a false message kind of typical isn't it steve that at this stage of the game they're settling down the spacecraft and they're finding out all the little things that possibly could go wrong but need to be bedded down before they can really say we have a good or a nominal orbit sure as as rick hauck was saying earlier they're preparing to do the ohms to burn which will occur around 40 to 45 minutes into the flight that will establish him in this 130 mile orbit and then we can sit back and relax a little bit more and that's due in about uh 15 minutes or so for right now isn't it okay tom that's it from houston thank you very much well as you heard uh in a conversation with hank hartsfield they said that they thought that it was going to be all right that little jet that we were talking about a few moments ago so they are continuing on their way so are we coming up in 22 minutes into this fight we'll be back with more from the kennedy space center right after this

[00:46:00 (https://www.youtube.com/watch?v=thNzPNhQwW4&t=2760s)](https://www.youtube.com/watch?v=thNzPNhQwW4&t=2760s)

right after this [Music] we're back at the kennedy space center and uh captain rick houck and i've been watching the clock here it's uh now 23 almost 24 minutes into this flight which means they're about 14 minutes away from the next ohms burn which will put them into their final configuration for right that means they're there once they're there then they will do some more but adjust maneuvers later but they're basically in orbit and they're they're ready to do their seven day measure okay everything continuing to sound very good here at the kennedy space center the flight went right off on schedule today it contains among other things some getaway specials this time these are little canisters that you can make reservations for scientific experiments that must be approved by nasa they range in cost from three thousand dollars on up nine of them this time have been placed on board by utah state university uh we want to show you one of the future getaway specials now it has to do with space art lee mccarthy has more on that inflated sculpture floating over a city skyline or tethered to the ground and illuminated at night its practitioners call this sky art or atmospheric art one of them has reached the frontier of space art and he will use the space shuttle to create it joe davis an artist at the massachusetts institute of technology will have a space art payload aboard the shuttle in september of 1983. what i want to do is to make a curtain of color in the sky that's visible from the ground in response to our first question how davis showed us the plasma fusion machine at mit it contains gases which are fired with a laser beam that creates a plasma a bright flash of light that lasts a fraction of a second we could see the plasma through a porthole but it was difficult to imagine as space art so davis said we should imagine a las vegas in the sky i'm going to discharge inert gas and and energize this inert gas much in the same way that inert gas is energized in a neon light bulb and and create a plasma which is the

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and and create a plasma which is the which is the the source of light in neon light bulbs and to do this i will use an electron beam but the neon art in las vegas is contained by glass tubing the space art will be free to spread davis has no idea how long it will last or how big it will get but this phenomenon will occur over a space of many miles and should be easily visible many times larger than the minimum visibility for a brilliant object at typical shuttle altitudes with the how answered sort of the next question why why would anyone spend a hundred thousand dollars to use the space shuttle as a paintbrush the greeks put stars in the sky to reward their heroes and this is kind of an opportunity to reward the whole human race for surviving insane technology for for determination for dreaming out loud joe davis is still dreaming his next project he wants to put a 57 chevy on the moon lee mccarthy nbc news boston well i suspect the chances of that happening are not very great nor do i think that we'll see any kind of las vegas neon up there as well nasa of course has accepted the reservation but they still pass right up to the last minute on any of these getaway specials speaking of getaway space shuttle 4 got away right on schedule here this morning we must as well my thanks to uh captain rick howe for being with us good luck in your flight next year appreciate it you'll be the first one to come back and land at the kennedy space center and you'll have astronaut sally ride along with him as well we'll look forward to continuing coverage of course of all this tonight on the nbc nightly news and combining politics and the space program john glenn today on meet the press for now i'm tom brokaw from the kennedy space center goodbye for all of us at

[00:50:10 (https://www.youtube.com/watch?v=thNzPNhQwW4&t=3010s)](https://www.youtube.com/watch?v=thNzPNhQwW4&t=3010s)

nbc this has been an nbc news

END